



06-21-04

ITW

Docket No. 4350-4004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Boris YOKHIN

Group Art Unit: 2882

Serial No.: 10/702,413

Examiner: To Be Assigned

Filed: November 5, 2003

For: X-RAY SCATTERING WITH A POLYCHROMATIC SOURCE

EXPRESS MAIL CERTIFICATE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Express Mail Label No.: EV 357796148 US

Date of Deposit: June 18, 2004

I hereby certify that the following attached paper(s) and/or fee

1. Information Disclosure Statement;
2. PTO-Form 144, including cited references; and
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Albert Isles

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(Signature of person mailing paper(s) and/or fee)

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INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313 1450

Sir:

Pursuant to Rule 56, applicant hereby calls the attention of the Patent Office to the references listed on the attached Form PTO 1449. Copies of the references ☒ are attached ☐ were filed in related application U.S. Serial No(s) _____, filed _____, respectively.

- ☐ This document is being filed within three (3) months of the filing date of the application
- ☐ Please charge the \$180 fee to Deposit Account No. 13-4500, Order No. _____.
- ☐ This document is being concurrently filed with the above-identified application
- ☐ This document is being concurrently filed with an Request for Continued Examination (RCE)
- ☒ This document is being filed prior to a first Office Action
- ☐ This document is accompanied by a Search Report/Communication cited in a corresponding PCT or foreign counterpart application.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for this Information Disclosure Statement, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4350-4004. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

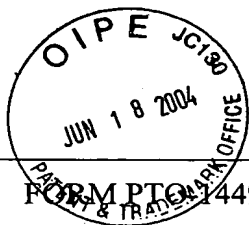
Respectfully submitted,
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Dated: June 17, 2004

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Date: June 6, 2004

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FORM PTO-1449 (Colb) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANTS' INFORMATION STATEMENT	ATTY DOCKET NO. 4350-4004	SERIAL NUMBER 10/702,413
	APPLICANT Boris YOKHIN	EXAMINER (N/A)
	FILING DATE November 5, 2003	GROUP ART UNIT 2882

U.S. PATENT DOCUMENTS

Examiner's Initials		DOCUMENT NO.	DATE	NAME	CLASS	SUB	FILING DATE
	AA	5,740,226	Apr. 1998	Komiya, et al.			
	AB	5,619,548	Apr. 1997	Koppel			
	AC	5,923,720	Jul. 1999	Barton, et al.			
	AD	6,512,814	01-2003	Yokhin, et al.			
	AE	2001/0043668	11-2001	Hayashi, et al.			

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		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB	TRANS- LATION
	AF						

OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

	AG	Chihab et al., "New Apparatus for Grazing X-Ray Reflectometry in the Angle-Resolved Dispersive Mode", Journal of Applied Crystallography 22 (1989), p. 460.
	AH	XTF5011 Tube, Produced by Oxford Instruments of Scotts Valley, California. June 1999.
	AI	Doubly-Bent Focusing Crystal Optic, Produced by XOS Inc., of Albany, New York. July 2000.
	AJ	Wiener et al., "Characterization of Titanium Nitride Layers by Grazing-Emission X-Ray Fluorescence Spectrometry", in Applied Surface Science 125 (1998), p. 129.
	AK	Model S7032-0908N array, Produced by Hamamatsu, of Hamamatsu City, Japan. May 2000.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

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	AA	2001/0028699	10-2001	Iwasaki			
	AB	6,381,303	04-2002	Vu, et al.			
	AC	6,389,102	05-2002	Mazor, et al.			
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	AE	5,151,588	09-1992	Kiri, et al.			
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	AH	J. Spear, "Metrology for low-k materials", Silknet Alliance, 2003.
	AI	J.R. Levine Parrill, et al, "GISAXS – Glancing Incidence Small Angle X-ray Scattering", Journal de Physique IV 3 (December 1993), pages 411-417.
	AK	Jaklevic, et al., "High Rate X-Ray Fluorescence Analysis by Pulsed Excitation", IEEE Transactions on Nuclear Science NS-19:3 (1972), pp. 392-395.
	AL	Jaklevic, et al., "Small X-Ray Tubes for Energy Dispersive Analysis Using Semiconductor Spectrometers", Advances in X-Ray Analysis 15 (1972), pp. 266-275.
	AM	Jaklevic, et al., "Energy Dispersive X-Ray Fluorescence Spectrometry Using Pulsed X-Ray Excitation", Advances in X-Ray Analysis 19 (1976).

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	AA	6,512,814	01-2003	Yokhin, et al.			
	AB	4,989,226	01-1991	Woodbury, et al.			
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	AE						
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	AH	Wormington, Characterization of Pore Size Distribution in Low k Dielectrics Using X-ray Reflectivity", presented at the Sematech Gate Stack Engineering Workshop (Austin, Texas, May 2, 2002).
	AI	Ito, "X-ray Scattering Method for Determining Pore-Size Distribution in Low-k Thin Films", Presented at the International Sematech Ultra-Low-k Workshop (San Francisco, CA, June 6-7, 2002).
	AJ	N. Wu, et al, "Substepping and its Application to HST Imaging", 28-7-2003.
	AK	Holy et al., "High Resolution X-ray Scattering from Thin Films and Multilayers", Springer Verlag 1999, pp. 18-21.
	AL	
	AM	

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